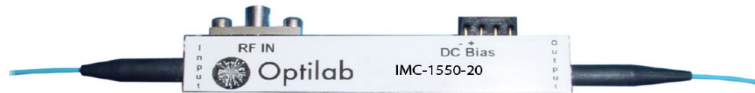


# IMC-1550-20



## 1550 nm, 20 GHz Compact Intensity Modulator

The Optilab IMC-1550-20 Intensity Modulator is designed for TDM and WDM up to 25 Gb/s transmission, and can also be incorporated for analog modulation of up to 20 GHz for satellite links, antenna remoting, and RF over Fiber. It is a hands-on bias-stabilized lithium modulator with excellent stability in a biased circuit, operating from 1530 nm to 1610 nm. It has an operating temperature tolerance ranging from -30 °C to +60 °C, and superior insertion loss provides for its maximum transmission power. The IMC-1550-20 uses a Polarization Maintaining (PM) input and Single Mode (SM) output fiber, and features separate RF and bias ports. Contact Optilab for more information.

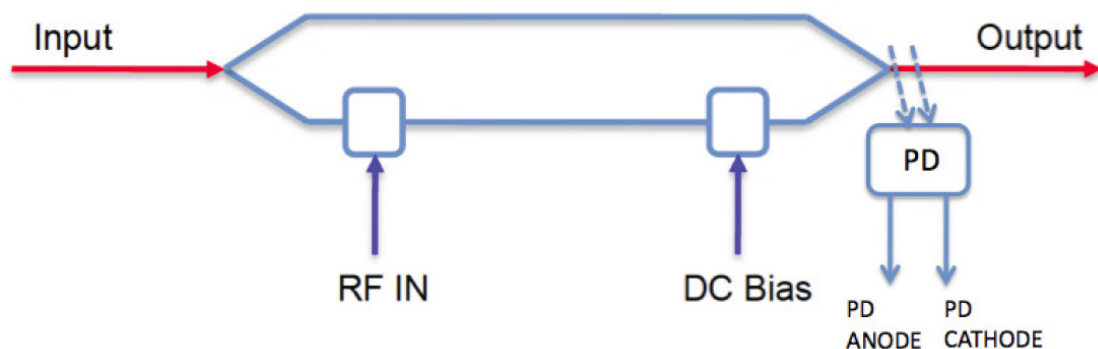
### Features

- Excellent stability in a biased circuit
- 1530 nm to 1610 nm operating wavelength
- Low insertion loss
- Useful bandwidth up to 20 GHz
- Wide operating temp. range of -30 °C to +60 °C
- Extended range available

### Applications

- TDM and WDM up to 25 Gb/s
- Analog Transmission up to 20 GHz
- Satellite Link
- Antenna Remote
- RF over Fiber

### Functional Diagram



# 1550 nm, 20 GHz Compact Intensity Modulator

## OPTIONS

**IMC-1550-20-XX**

XX **TQ:** Temperature Qualified

## TECHNICAL INFO

For technical info and support:

[sales@optilab.com](mailto:sales@optilab.com)

[www.optilab.com](http://www.optilab.com)

## WEB ORDER

To order, please visit [OEQuest.com](http://OEQuest.com).



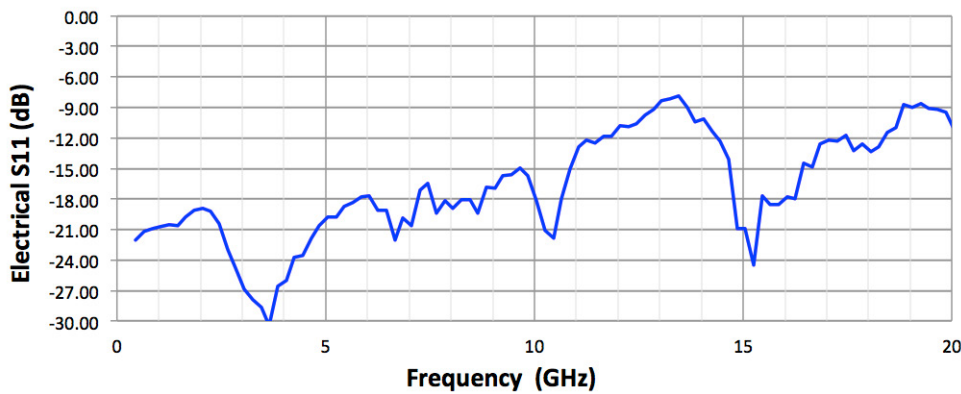
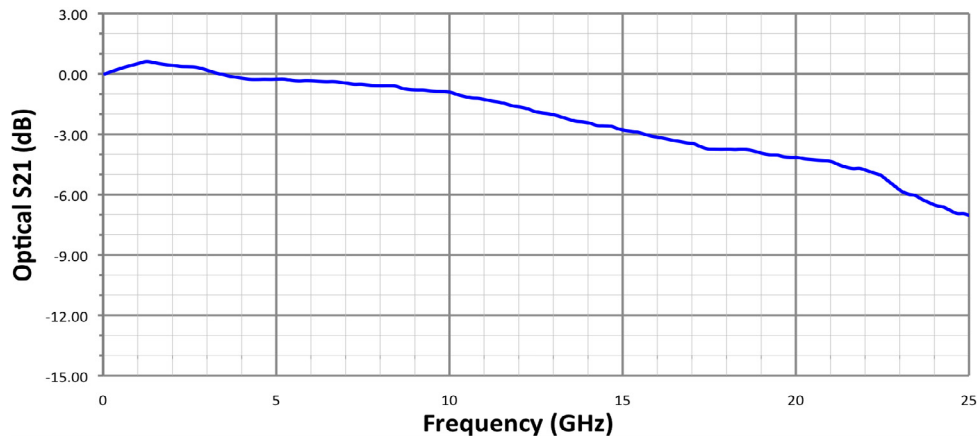
## Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

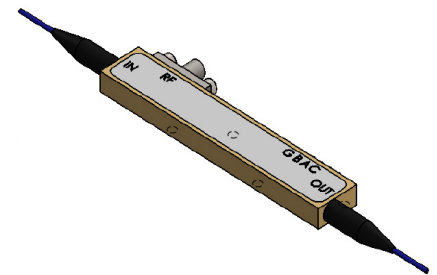
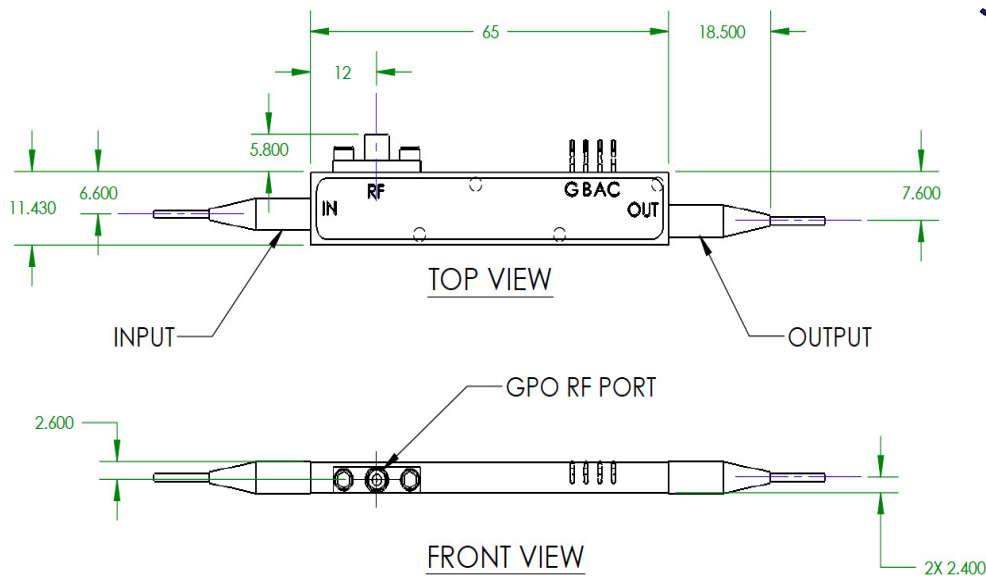
General Specifications	
Input optical power	100 mW max.available
Operating wavelength	1530 to 1610 nm
Chirp Value	<± 0.2 (zero chirp design)
Insertion Loss	4.0 dB typ. ; 4.5 dB max.
Extinction Ratio	≥ 25 dB min.
Optical return loss	≤ - 45 dB
S21 Bandwidth	20 GHz typ. ; 15 GHz min.
S11 Return Loss	≤ -10 dB @ 10 GHz
V $\pi$ (RF Port)	6.7 V typ. @ 10 GHz
RF Input power	27 dBm max.
Impedance (RF Port)	50 $\Omega$ typ.
V $\pi$ (Bias Port)	< 5 V @ DC
PD Responsivity	20 mA/W min., 30 mA/W typ.
Analog Link Performance	
IIP3 @7 GHz	29 dBm
1 dB Compression Point @10 GHz	14.5 dBm typ.
Mechanical Specifications	
Operating Temperature (standard)	-30 °C to +60 °C
Operating Temperature ( <b>TQ version</b> )	-55 °C to +75 °C
Storing Temperature	-60 °C to +90 °C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber Type	PANDA - PM
Output Fiber Type	SMF-28e
Input Connector	PM FC/APC, PM FC/UPC
Output Connector	FC/APC, FC/UPC
Material	LiNbO3
Crystal Orientation	X-cut, y-propagating
Waveguide Process	Ti-indiffused
Bias Port Connector	2 Pin electrode
RF Port connectors	GPO
Cabling	900 $\mu$ m tubing
Dimensions	2.56" x 0.45" x 0.19"

# 1550 nm, 20 GHz Compact Intensity Modulator

## Typical S21 and S11 Bandwidth



## Mechanical Drawing



Pin #	Description
G	GND
B	DC BIAS
A	PD ANODE
C	PD CATHODE

\* Dimension unit: mm